# SOUTH END FACTORY OPERATIVES

## Employment and Residence

BY

ROSWELL F. PHELPS, A. M.

Late holder of the South End House Fellowship
AT HARVARD UNIVERSITY



Published by the
SOUTH END HOUSE ASSOCIATION
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## NOTE

*The South End House Fellowship at Harvard University is maintained by certain Graduates of the University living in Boston. The incumbent is appointed by the Faculty in consultation with the Head of the South End House, and is in residence during the year at the Settlement House. He may be reappointed for a second year. The investigation, whose results are in part herewith presented, was continued through a period of two years.*

# OUTLINE

Introduction. — Methods of Conducting the Investigation.

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The Industrial Development of the South End — Plate I.

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B. General Tendencies.

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## SECTION III.

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A. Home Renting versus Home Buying.

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(a) Influence of transportation on location.

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C. Methods of Relieving Congested Centres.

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# PLATES



NOTE. — Plate I. was prepared to serve as an outline basis for Plates II. and III., which are to be considered as superposed upon it in order that the full significance of locations upon them may be clearly brought out. By this method is avoided that confusion to the eye which would necessarily result from having too many outlines upon a single plate.

## INTRODUCTORY.

THE results of the present investigation are not assumed to be exhaustive. The work has been entirely the result of effort on the part of one person, and, in comparison with results of statistical investigation conducted under the official authority of a Bureau of Labor Statistics, it may seem somewhat fragmentary. The very narrowness of the field which it covers might also lead one to underestimate its value. It is this very point, however, which is urged in its favor. The elaborate statistical inquiries of our Labor Bureaus cover immense fields, but that very immensity renders the information obtained general and stereotyped. A single individual, working unofficially, is able to obtain through close observation and personal conferences much valuable information which bureau agents are unable to discover and which, in any case, could not be set forth by their method of tabular representation.

In certain cases the presentation of a general letter of introduction from Mr. H. G. Wadlin, late chief of the Massachusetts Bureau of Labor Statistics, served to offset the difficulty in meeting those men of affairs from whom valuable information might be obtained, but who were averse to spending their time in satisfying the mere curiosity of a private individual. In most cases, however, this letter was not presented, for its official nature too effectually checked the freedom of intercourse which was desired. Much more of a statistical nature might, with it, have been secured, but that which is presented is the more reliable because it has been volunteered in response to a request rather than submitted in compliance with an authorized demand. Additional value may be attributed to the amount and nature of the statistical evidence secured, on account of the very voluntary and personal way in which it was offered. With these remarks in mind, much of that which follows and which might be considered trivial and narrow in application will be found of considerable significance because of the methods employed in its

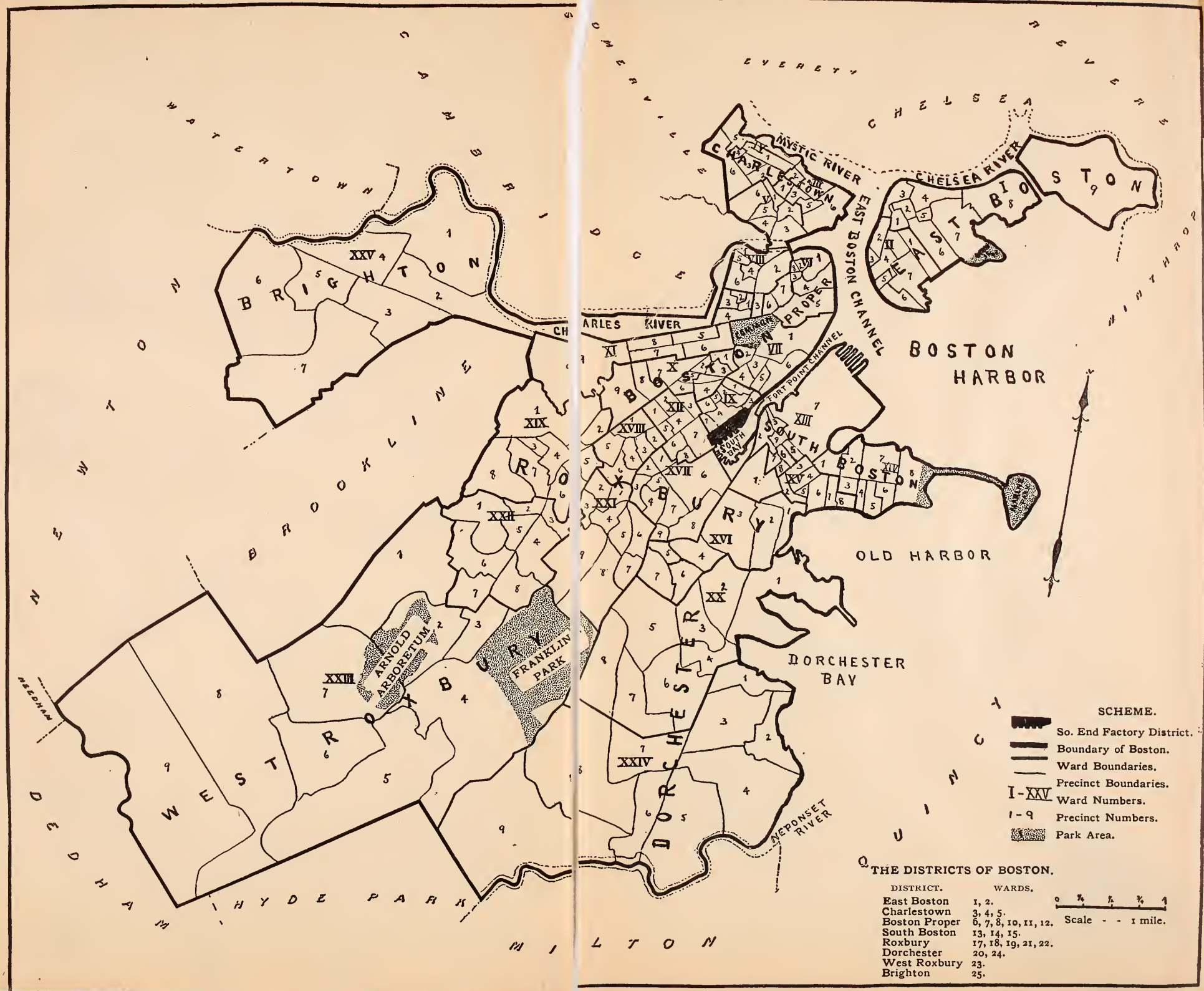
preparation. To a great extent, therefore, the statements made here are the results of impressions formed through examination of statistical evidence personally obtained, through supplementation and verification of such evidence, and through talks with persons who on account of business interests are well informed as to the special topics here considered.

Mechanical aids in the form of charts with references, specially prepared street and factory directories for this district as distinct from the city at large, and tabular representations for comparison, have been of great value in the saving of time, in the discovery of certain important relationships between the various factors in the problem, and in the representation of the more important principles. Of these mechanical aids, three plates to which reference will be made later accompany these pages, and a few tables of statistics, personally obtained, are inserted and commented upon at their appropriate places in the text.

BOSTON
HARBOR
OLD HARBOR
DORCHESTER
BAY
CHARLES RIVER
EAST BOSTON CHANNEL
BOSTON

# PLATE I.—OUTLINE MAP OF BOSTON

To be considered as an outline basis for PLATES II and III. SHOWING DISTRICTS, WARDS AND PRECINCTS.




SCHEME.

- So. End Factory District.
- Boundary of Boston.
- Ward Boundaries.
- Precinct Boundaries.
- I-XXV Ward Numbers.
- 1-9 Precinct Numbers.
- Park Area.

THE DISTRICTS OF BOSTON.

| DISTRICT. | WARDS. |
|---|---|
| East Boston | 1, 2. |
| Charlestown | 3, 4, 5. |
| Boston Proper | 6, 7, 8, 10, 11, 12. |
| South Boston | 13, 14, 15. |
| Roxbury | 17, 18, 19, 21, 22. |
| Dorchester | 20, 24. |
| West Roxbury | 23. |
| Brighton | 25. |

0 ¼ ½ ¾ 1

Scale - - 1 mile.

## SECTION I. THE INDUSTRIAL DEVELOPMENT OF THE SOUTH END (PLATE I.).

An outline of the historical growth of the South End as an industrial community will aid us in understanding the present industrial conditions here. In 1800 but a very small portion of the district now called the South End was in existence, and that portion was a narrow neck of land connecting Roxbury with the present business section of Boston. The South End in its present extent was not completed until about 1860, and even then certain small checker-board plots between intersecting streets were left to be filled in at the convenience of the owners. In the Back Bay a mill-dam was finished in 1821, and mills were erected to make use of the water power, but in 1849 the city "declared the condition of the Back Bay a public nuisance," and, after much conflict between the mill owners and the committee which had been appointed to look out for the city's interest, the basins on that side were filled, and much valuable land was added to the area of the city. Previous to 1849, however, the South Bay had been rapidly filled in, and the South End was in extent then almost as at present. Coal, lumber, and stone yards were already being established along the shore of the South Bay, and these have continued to follow the water-line as it receded further from the original land. The brick and lumber yards, which had been situated in the region of Dover Street previously to 1850, and which had furnished employment to a large number of workmen in that then sparsely populated district, went out of business about that time. The natural introduction of wood-working by steam power led to the establishment of such workshops in this district, and this was encouraged by the nearness of coal and lumber supplies brought so conveniently by water.

The mills in the Back Bay region, on account of the filling in there under public authority in 1852, either went out of existence or moved to other parts of the city. The cheapness of made land in the South End, where steam power was being used, encouraged a removal of factories eastward as new land was continually added, and, though the filling in of land on this side almost ceased in 1860, this eastward movement continues even now. At present we find that the only factories in this section which now stand entirely upon original land are two piano factories. One of these has but recently supplanted an older concern which had already been crowded out of the front portion of the street floor to make room for three stores which were pioneers of the advance of the mercantile section of the city up Washington Street out Roxbury way. A directory of 1861 gives eight piano companies which were then situated on the original land of "the Neck." Two of these have moved upon the made land eastward, two only have remained on original land (one of which has recently moved further from the down-town business section where formerly it combined show rooms with factory), two have moved out of the district, and two are no longer in existence. The piano factories are as a class the largest factories in the district at present, but an examination of other industries represented here shows a like change of locations of plants from the original land to the made land eastward. The movement upon new land has been eastward rather than westward because the South Bay land in the east was already made and a considerable industrial community (using steam power) was established there before the making of the new Back Bay land was fairly begun. Furthermore, the South Bay, on account of fewer bridges across its outlet (Fort Point Channel) and a better channel, was more easily accessible by boat during the early growth of the manufacturing industry of the city than was the Back Bay, with its shallow and obstructed outlet, the Charles River. These advantages, together with the earlier expansion of the South End, determined the direction in which the manufacturing section of the city should grow.

There has been a rapid growth of the South End both industrially and in population since 1860. But, while numerical population has increased, the social character and make-up of its population has greatly changed. Until 1870 this was still a distinctly residential district, with its "swell-front" brick houses, many of which are still

standing, but which now shelter a very different class of occupants. At that time the rapid industrial growth of this section, together with the advance of the mercantile section of the city southward, led to a rapid exodus of the more prosperous to the still newer and more residential section of the city, — the Back Bay District, — which after 1852 was being rapidly filled in. The fine old brick houses in this vicinity were thus left for the housing of the working people who were settling here in the midst of the growing industrial region. Others who worked in the mercantile establishments further down-town found, in these vacated houses, homes conveniently near their work. Thus has the character of the district changed. Immigration into this district from other parts of the city and from foreign lands, especially Ireland, has resulted in changing the South End from a residential section of prosperous Americans, which it was in 1870, to a manufacturing district having in 1895 a native population of only 30 per cent. and a foreign population of 70 per cent. The struggle for predominance has been between the industrial and the residential interests centered here, with a decided victory for the former. The mercantile influences on the north have as yet been of small but of always increasing importance in the struggle. As the factories in this district are for the most part wood-working, the mercantile approach has been less resisted because these factories have been invited in a southeasterly direction by cheaper ground rents and by the greater economy resulting from nearness to the supplies of lumber and coal brought by vessels almost to their back doors. Several of these factories have their own docks, with coal and lumber yards on the water's edge or very conveniently near. Several steam stone yards also find in this section a very convenient location, for rough stone is brought directly to them by vessel and is stored cheaply at the docks.

This district has thus been the scene of two kinds of struggle: that between the forces of population and that between the various industrial and non-industrial forces. The foreign population has won a decided victory over the native. The industrial forces won for a time an almost complete victory over the residential, aided in the latter part of the contest by the mercantile forces, but these, the mercantile, have turned upon the short-while victor and bid fair soon to drive factories and factory employees entirely from the field. These encroachments of the mercantile section on the north,

together with that great transforming agency, — transportation, — will undoubtedly give to the South End an entirely new character. This district, which now affords locations mainly for factories and tenement-houses, will soon become merely an extension of the down-town business section to the exclusion of many of its larger factories and to the expulsion of a portion of its present industrial population into the suburbs. Marked evidences of this change already appear, and the movement, with each new advance in land values and in transportation facilities, gathers strong momentum.

With a knowledge of these historical facts and general tendencies, and suggestions of probable changes in the future, the problem of housing the factory operatives of the South End gains new interest and presents decidedly different aspects.

## SECTION II. PRESENT INDUSTRIAL CONDITIONS IN THE FACTORIES OF THE SOUTH END.

The gathering of statistics by a single individual is not apt to be a comprehensive or, of itself alone, a very satisfactory means of investigating a subject of even such narrow limits as this upon which we are engaged. It has been found advisable, however, to use the statistical method even here, but rather as a means of suggesting and supplementing the impressions gained, than to serve of itself as a proof of various hypotheses. As suggestive rather than as convincing the statistics secured have been of special service in this instance.

Our attention is directed first of all to the conditions of employment of that particular class of working men and women — the South End factory operatives — whose housing we shall later investigate. The two sources of information which suggest themselves — the employer and the employees — are examined in order.

Throughout we use the term "factory" as including the larger workshops, it being understood that only those establishments are considered in which there is the association of laborers for the use of central machine-power and for economy in production. Ordinarily, establishments in which there are less than five persons employed are not considered. The term "operatives" includes

wage-earners only; officers, clerks, or other salaried persons are not considered.

As a groundwork for this investigation a complete factory directory of the district was made by streets, and contained the firm or corporation name, the street and number, the nature of the industry, and — in cases where the factory did not occupy the whole building — the number of the floor or floors on which it was located. The advantages of such a directory are obvious.

A reclassification of these factories under the various industries showed a total of 118, distributed as follows: —

TABLE 1*.

| | |
|---|---|
| Pianos and Church Organs | 11 |
| Wood-working, Carpentering and Building | 44 |
| Metal Working (16) | |
| Brass, Copper and Galvanized Iron | 6 |
| Machinery Mfg. | 5 |
| Others (Small Shops) | 5 |
| Laundries | 9 |
| Wagon and Carriage Repair Shops | 5 |
| Stone Works | 4 |
| Unclassified | 29 |
| Total | 118 |

*The area on which these factories are located is represented on Plate 1.

The above classification has been arranged in the order of importance of each as an industrial factor in the community, and this order represents fairly accurately the importance as regards the total number employed in each industry. The order as to rates of wages would be considerably changed. Piano and church-organ manufacturing would still hold first place, but the laundry industry would drop to the very last place in the list. The reason for this will be explained later.

*The Piano Industry,* heading the list, is the most flourishing one in the district. In but few instances are the wages paid less than $10.00 a week. In several instances some girls are employed in certain of the lighter tasks of "setting up," but even here some

skill is required, and the wages paid the girls are better than those paid in the laundries. A majority of the workmen receive from two to three dollars a day and the more skilful polishers, regulators, and tuners, being generally paid by the piece, receive as high as thirty dollars a week during a fair season. The operatives in the piano and church-organ factories seem to be the best paid, most skilful and enterprising of all the factory employees in the district. As to rates of wages and character of employees in these various industries it is rather hard to make any comparisons, for in the same industry there are usually several different grades of labor, and the comparison of averages is neither safe nor fruitful. The requirements of special skill in the case of operatives in piano factories and the special competition of Chinese labor in the laundry business give sufficient foundation for placing the one first and the other last in the list of factory industries given above, where rates of wages and freedom of industrial conditions alone are under consideration.

Second in order might come the *Wood-working, Carpentering, and Building Industries,* but these as a rule employ such a small number of workmen (seldom more than four or five, and these often employed in "outside work") that, although there are forty-four shops represented, it seems hardly worth while considering them as a class of themselves. The output of these shops is, however, considerable. They are located a number of them in one building, "in rooms with power," each room being supplied with power from a central plant. The hand carving and other wood-working, much of which formerly was done by hand, is now done by small groups of workmen using specialized machinery run by power from a large plant.

*The Metal-working Industry* includes two large shops, but these do not employ as many workmen as their size might indicate. The other metal-working shops occupy as a rule but one or two rooms each and employ but few workmen. Machine power is used, but, as in the case of manufacturing incandescent lamp globes, gas fixtures, and other small metal appliances, there is much hand work done. Considerable skill is required, and the wages are comparatively good.

A fairly well paid class of workmen is employed in the *Stone Works.* They receive $2.50 a day and often more, but an apprenticeship is necessary before the better wages are received. The hand

workers are specially well paid, for such work requires a peculiar mechanical knack in handling the tools. The use of steam for sawing, cutting, and polishing the stone is reducing the mere mechanical labor to a minimum. For the higher grades of skilled hand cutting, wages as high as $5.00 a day are paid.

The *Wagon and Carriage Repair Shops,* employing a total of less than forty workmen, need no special mention.

The low rate of wages paid in the *Laundries* (often as low as $3.50 a week) may be accounted for by the fact that women and girls are employed. Their labor is, of course, "subsidized," in the sense that they are partly supported at home by parents, or by other members of the family. Mr. Mitchell Wing, in an address delivered before the New England Laundry Men's Association, lamented the great immigration of Chinamen into our cities, and affirmed that Chinese competition has made the laundry business much less profitable than in former years. So intense has been the unequal competition that an attempt has been made by the Association to regulate by law the conditions of Chinese labor and to bring it upon a more equal basis with American labor. The Chinaman subsidizes himself through the great economy which is made possible by his extreme isolation from American society. Laboring, eating, and sleeping in one or two small basement rooms, he is able, through freedom from the restraints of ordinary workshop regulations, to carry on a kind of competition destructive of righteous profits in this important industry, which outside of his shop is regulated by civil and sanitary law.

Of the other twenty-nine unclassified workshops in the list, none are of special importance for our purpose. Included among them is a variety of small establishments. There are several candy "factories," two blacking factories, several establishments for knitting underwear and hosiery, one for the making of aprons and linen suits, one for the manufacture of leather and duck garments, a patent-leather repair shop and others. The total number of employees in all of these unclassified factories taken together would probably not exceed six hundred.

A general summary of the industrial conditions of the South End Factories taken in classes might be made in tabular form as follows: —

TABLE No. 2.

| Industry. | No. of Establishments included. | No. of Operatives. | Comparative Rank as to— No. of Employes. | Skill Required. | Rate of Wages. | Value of Output. |
|---|---|---|---|---|---|---|
| Piano and Church Organs (a) | 11 | 686 | 1 | 1 | 1 | 1 |
| Wookworking, etc. (b) | 44 | 298 | 2 | 2 | 2 | 2 |
| Metal Working | 16 | 120 | 4 | 3 | 3 | 3 |
| Laundries (c) | 9 | 260 | 3 | 5 | 6 | 5 |
| Stone Works | 4 | 40 | 5 | 4 | 4 | 4 |
| Wagon and Carriage Repairs | 5 | 35 | 6 | 6 | 5 | 6 |
| Unclassified | 29 | 580 | — | — | — | — |
| | 118 | 2,019 | | | | |

*(a) In each case first in rank.*

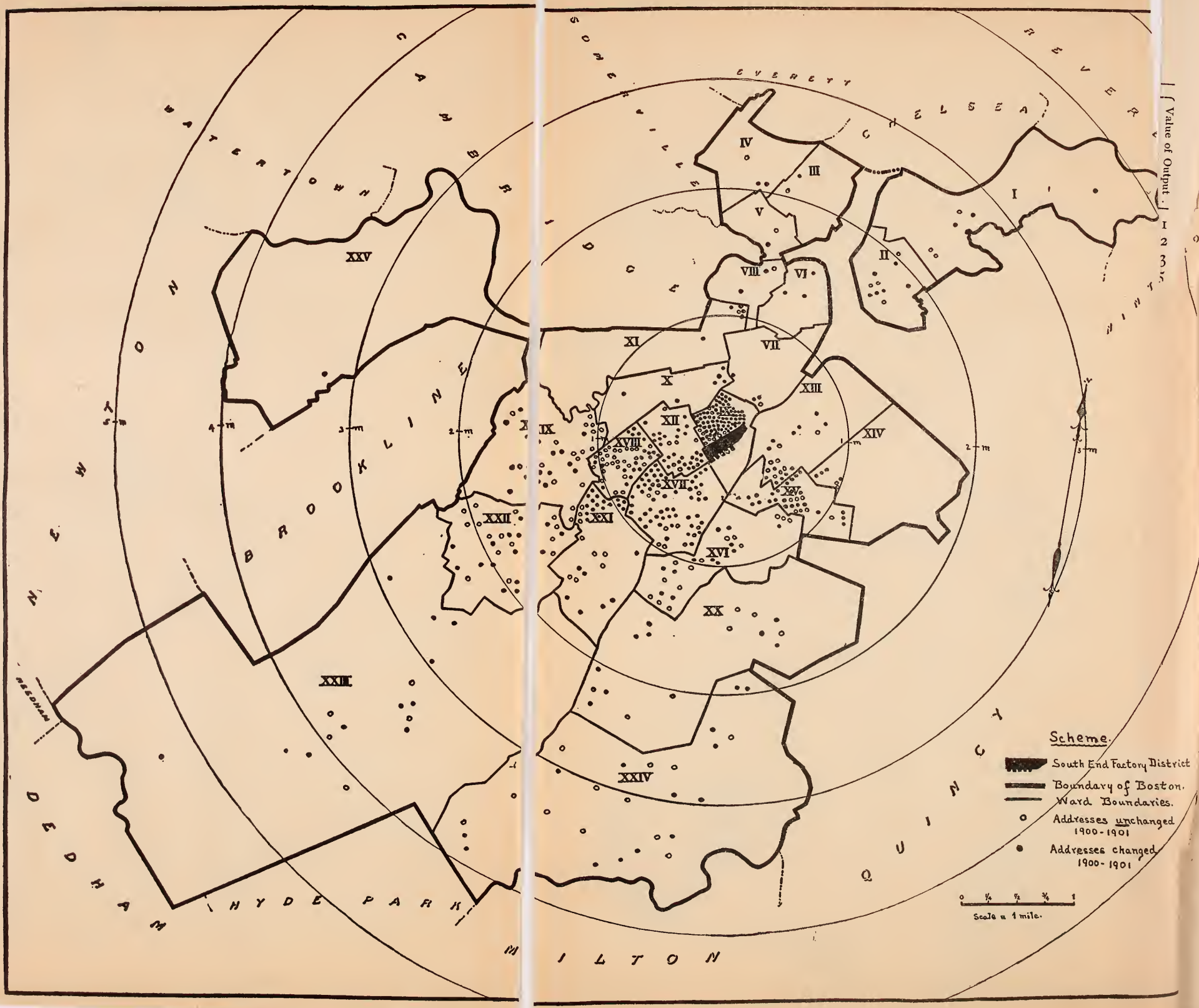
*(b) In each case second in rank.*

*(c) Low wages due to employment of women and to Chinese competition.*

The information above was obtained in most cases from the employers. In a number of cases permission was given to examine the wage lists, but more often there was considerable hesitation in giving information to one who showed no official credentials. Occasionally the letter of introduction from Chief Wadlin of the Massachusetts Bureau of Labor Statistics was presented. The employers showed in many cases a thorough interest in the subject and a wide acquaintance with their employees. Some very interesting information not in direct line with this report was freely volunteered. Often the acquaintance of employers with their employees, especially in the smaller shops, was so intimate that the employers were able to give offhand the home addresses of their workmen. Unfortunately, however, in most of the larger factories the wage lists and pay-rolls alone represented the mutual interests between employers and employed. The conclusions at which we arrive respecting the more personal life of the two thousand operatives in these 118 factories and workshops under consideration must therefore depend more or less upon the approximate statistical information here presented. The conclusions are not, however, on

# PLATE II.—RESIDENTIAL DISTRIBUTION OF THE SOUTH END FACTORY OPERATIVE

To be considered as superposed on PLATE I.



that account to be mistrusted, for the figures obtained are sufficiently large to justify the conclusions to be drawn from them and to allow for a considerable degree of approximation in the mere enumeration of cases.

## SECTION III. THE HOUSING OF THE SOUTH END FACTORY OPERATIVES.

### A. RESIDENTIAL DISTRIBUTION BY DISTRICTS (PLATE II.).

The main aim in obtaining statistical information was to determine what proportion of these 2,000 operatives working in the South End live in this district in which they work, and further to determine what is the proportionate representation here of workmen who reside in other portions of the city or in its suburbs.

Information was obtained as to the residences of 1,102 out of the approximate total of 2,000. For the remainder it was impossible to obtain any information whatever, through lack of address lists, and the employers were either unable or unwilling to obtain the information desired. But the 1,102 addresses are quite accurate, and the list includes a very fair representation of each of the more important industries in the district, *i. e.* each industry is represented fairly in proportion to the total number of workmen engaged in it, irrespective of the size of the shops.

The proportionate representation of each of the nine principal districts of Boston is given in Table 3.

TABLE 3.

| | District. | Distance from Factory District. | Number of Persons. | Proportion of total 1,102 considered. |
|---|---|---|---|---|
| 1. | Boston (proper) | Within 1 mile | 369 | 33.5% |
| 2. | Roxbury | " 2 miles | 230 | 20.8 |
| 3. | South Boston | " 3 " | 126 | 11.4 |
| 4. | Dorchester | " 5 " | 79 | 7.2 |
| 5. | Jamaica Plain | " 4 " | 41 | 3.7 |
| 6. | Cambridge | " 4 " | 26 | 2.4 |
| 7. | Cambridgeport | " 3 " | 26 | 2.4 |
| 8. | Somerville | " 3 " | 25 | 2.3 |
| 9. | East Boston | " 3 " | 22 | 2.0 |
| | | | | 85.7% |
| | Unclassified and unknown | | | 14.3 |
| | | | | 100.0% |

From this table we see that out of the total number over 85 per cent. live in the nine districts above, and about 15 per cent. are distributed elsewhere. Of the total number, —

33.5 per cent. live in one district — Boston (proper), *i. e.* on the peninsula.

54.3 per cent. live in two districts — Boston (proper) and Roxbury.

65.7 per cent. live in three districts — Boston (proper), Roxbury, and South Boston.

For the remaining 36.3 per cent., the distance from home to factory is so great as to make it probable that the operatives use some means of daily transportation back and forth. Those living in Boston (proper) would not be under such necessity, except those who dwell in the extreme limits of the North and West Ends — a very few. It is probable, however, that a considerable number of those living in the remoter parts of Roxbury and South Boston make use of the transit facilities. Adding, then, to the 36.3 per cent. living decidedly beyond walking distance, one-half the number living in Roxbury and South Boston (*i. e.* one-half of 32.2 per cent. or 16.1 per cent.), we have a very modest approximation of over 50 per cent. Our conclusion on this point, then, is that of all the persons employed in the factories of the South End (this does *not* include other industrial laborers of the district) at least one-half make daily use of the transit accommodations between their homes and their work.

Considering the operatives more in detail, it is found that in those factories where the proportion of women to men is large, the proportion of those living near the factories to those living more than walking distance away is also large, showing undoubtedly that the women and girls are more averse to riding back and forth to their work than are the men. We cannot stop to examine each industry in turn with regard to residential distribution of the operatives, but a word should be said with reference to the laundry employees. These, as has been said, are mostly girls and women, receiving but very poor wages, some as low as $3.50 a week. They cannot, with these small wages, afford a daily car fare of ten cents; they are therefore obliged to live within easy walking distance of the shops in which they work. Taking, for example, one laundry, employing fifty-eight persons, of which only two are men, we find

that forty-two live in Boston (proper) and four in South Boston, (*i. e.* forty-six live within one mile of the laundry); of the remaining twelve the addresses of five are unknown, and seven live outside of the two districts mentioned. It is probable that the seven who live beyond walking distance of the laundry are the better paid of the employees; in three of the cases this has been ascertained to be a fact. The case of this one laundry is not exceptional, — it illustrates fairly the conditions in the other eight in the district. Most of the young women and girls employed in the South End factories and laundries are single and live at home with their parents in one of the three near-by districts, — Boston (proper), Roxbury, and South Boston. The examination of the address lists obtained at the various factories shows only a few cases of women or girls who live more than a mile from their work. Most of these work in the piano factories, where higher wages are paid them than in laundries.

In the case of the three largest piano factories, we find that only 26 per cent. of the operatives consent to live near by their place of work. We have noted earlier that the employees in the piano factories are the best paid and the most progressive of all the factory employees working in the district. More of them have discovered and availed themselves of the advantages of better and cheaper residences in other districts. This examination of the residential distribution of the best paid employees (those in the piano factories), and of the worst paid (those in the laundries), is quite sufficient to show the influence of wages, of sex, and of occupation on the location of the homes of those who work in the factories of this district.

The power plant of the Boston Elevated R. R. is located in the South End and employs 531 men whom we have not included among the 2,000 factory operatives. Upon request, the vice-president of the road kindly had the question of their residential distribution investigated, and he sent the surprising information that, out of the 531 employees working at the plant, only thirty-seven lived in the neighboring South End district. This may be explained by the fact that but few of these employees receive less than $2.00 a day, and especially by the fact that the R. R. Company grants free transportation to its employees to and from their work, and few of them, therefore, find any inducement to live in the crowded dis-

trict near the power plant. This is a special case, but it suggests what would be the choice of residence made by South End employees if the element of cost of transportation were left out of the question.

In this connection it seems desirable to speak of the comparative facilities of transportation to and from the districts in which the factory employees reside.

(*a*) From each of these districts (except East Boston) a five-cent fare is sufficient for the whole trip, and free transfers are granted at fifteen different points to other cars running in the same general direction. The payment of three cents extra, making a fare of eight cents, entitles one to a transfer to lines running at right angles in either direction, but, in general, direct lines connect all the important points in Greater Boston, and in several cases a continuous ride of eight to ten miles may be taken for the single fare.

In the case of East Boston, which is separated from Boston (proper) by water, a free transfer is given for a continuation of the route on the other side of the Channel, but a uniform rate of one cent is charged for ferry transportation. The extra charge and the necessary changes — ferry and car — account for the fact that fewer of the South End factory operatives reside in that district, although rents there are better and cheaper than in Boston (proper). Upon the completion of the East Boston Tunnel (street car subway) under the channel to East Boston, the electric car route will then be continuous and a new impetus will be given to housing in that direction. East Boston, which is now ninth in our list, will become for South End employees a very desirable residence section. Until recently a double fare was charged to Roslindale, though this part of the city is nearer than several other districts which may be reached for a single fare. This was due to the fact that the route was divided between two different companies. The West End Road has extended its tracks in that direction and has absorbed its smaller competitor. The cheaper fare to Roslindale will make this district more easily accessible to the factory operatives and will increase its proportionate representation. The single management of street railways, through the extension of the five-cent fare, extends the limits of suburban residence, and is especially of benefit to laborers who wish to avail themselves of the advantages of suburban homes. It is a noteworthy fact that the order of repre-

sentation for the nine districts spoken of above is determined by the grade of excellence of electric transportation facilities between the South End and each district.

The new elevated railway (completed June, 1901), between Sullivan Square (Charlestown) and Dudley Street (Roxbury), passes directly through the South End district, and promises very efficient service for north and south transportation of *sub*urbanites. Its noisy and unsightly features tend to drive out the population of the South End, and without doubt its erection will result in advancing Roxbury, Dorchester, and Jamaica Plain each to one of the first three places in our list, forcing Boston (proper) — although its entire area is within walking distance of the South End factories — into fourth place. For the same reason Charlestown, Malden, and Medford, which do not at present appear among the first nine favored districts, will come into prominence, to the exclusion of Cambridge, Cambridgeport, and Somerville from their present position as desirable residence districts for South End factory operatives.

(b) An examination of steam railroad facilities has also been carefully made. It is to be borne in mind, however, that on account of the distance of the South Terminal and Union Stations from the factory district, the steam roads are little used by these operatives. The additional expense of getting to the stations and the generally higher steam railway rates make it impracticable for all but the very best paid workmen to use these means of transportation. There are a few such exceptional cases, but these are of persons living far out of town with special reasons for such location of their homes. Of all the districts to be reached by steam cars, Jamaica Plain, Malden, and Dorchester offer the best inducements in the way of fine residence accommodations for those enterprising employees who wish to get further than four miles from the heart of the city. Until recently the rates on steam cars were so high that few of the employees of the class with which we are dealing could afford to go so far from their work. In order to encourage out-of-town residence of workingmen an act (Chap. 298 of the Massachusetts Labor Laws for 1900) was passed establishing workingmen's trains. The main provisions of this act are "that workingmen's trains must be run by any specified railroad company whose line terminates in the city of Boston. Such trains (not less

than two each way) shall arrive at Boston between six and half-past seven in the morning and between six and half-past seven in the evening every week-day, and shall depart between the same hours. For such trains, the company, for distances not exceeding fifteen miles, shall furnish season tickets at a rate not exceeding three dollars per mile per year, and quarterly and weekly tickets at a rate not exceeding one dollar per mile per quarter. All such tickets shall be good once a day, each way, for six days in the week. For such trains the company may provide special cars." This act took effect July 1st, 1900. Under these regulations a man living five miles from Boston can for $30.00 a year — less than ten cents for the daily round trip — have his home in such a healthful, uncrowded district as Dorchester, and still conveniently go back and forth between his home and his work. At the same time he can have five rooms instead of three, and the rent enough cheaper to pay for the whole cost of his transportation. In addition he might have a yard in which his children could play and where he might, if he wished, raise a little garden truck for his table. The saving in doctor's bills would be no insignificant item. A careful study of transportation facilities shows that this is the main question which determines the location of those homes of the South End factory operatives which are beyond a comfortable walking distance from the factories in which they work.

### B. RESIDENTIAL DISTRIBUTION BY WARDS AND PRECINCTS.

The lists of names and addresses obtained from the factories were examined in order to determine the location of the homes of the factory operatives. To avoid wearisome labor, which would have been necessitated by plotting on a map the exact location by street and number, it was found best to find from the assessors' street directory merely the ward and precinct in which each address was located, inasmuch as this precinct is of sufficiently small area, especially near the center of the city, to give as accurate an idea of the location of the address as could well be desired for this purpose. Plate II. represents the location of all the 511 addresses considered. The full dots represent the location of all the homes of those who were still in residence at the addresses given in May, 1901, that is, were in residence at that address for at least one year beginning

May, 1900. The hollow dots represent the addresses of those who lived at the address given when the factory lists were made out, but who had moved before May, 1901.

On Plate II. the solid block represents the area in which are situated all of the South End factories — the wage lists of some of which we are considering. The concentric circles are respectively 1, 2, 3, 4, and 5 miles in radius, having as a centre a central point in the factory district. Counting the spots in each circle, we derive the following table: —

TABLE 4.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 297 | or | 58.1% | live | within | 1 | mile | of | the | factory. | |
| 214 | " | 41.9 | " | over | 1 | " | from | the | factory. | |
| 61 | " | 11.9 | " | " | 2 | miles | " | " | " | |
| 20 | " | 3.9 | " | " | 3 | " | " | " | " | |
| 3 | " | | " | " | 4 | " | " | " | " | |
| 1 | " | | lives | " | 5 | " | " | " | " | |

The radial distances given above are of course shorter than the walking distances through the streets. It would therefore be safe to assume that all beyond the circle of one mile radius have occasion to use the electric cars in going to and from their work. Car fares of at least sixty cents per week must, therefore, furnish an item in the wage budget, and saving in rent due to more remote location from the central portion of the city must in great part serve to balance this additional expenditure. And we find that this rule is more and more true as we consider those who are living further removed from the central district. On Plate II. are *not* represented the locations of the homes of 111 South End factory operatives who live outside of Boston. When these are included, even more strikingly is shown the tendency for better paid workmen to live at a considerable distance from their work. Including these 111, who live outside the twenty-five wards of Boston, we have the following table of residential distribution complete for the operatives whose addresses were obtained.

TABLE 5

| | | |
|---|---|---|
| 25 Wards of Boston | | 511 |
| Other Districts: | | |
| Cambridge | 45 | |
| Chelsea | 7 | |
| Somerville | 11 | |
| Everett | 5 | |
| Others (less than 5 each) | 43 | 111 |
| | | 622 |

All of these districts are at least two miles from the Factory District; so then adding these 111 to the 214 in Boston over one mile from the factories, we have a new total of 319 factory operatives who live more than one mile from their work. Of 622 employees now considered, we find that 319, or 51.1 per cent., live more than one mile from their work. This result becomes reconciled to that obtained more roughly by districts (page 16), where the proportion was shown to be at least 50 per cent.

An examination of the two groups — A, those whose addresses remained unchanged, and B, those whose addresses were changed within one year — shows results in the following table: —

TABLE 6.

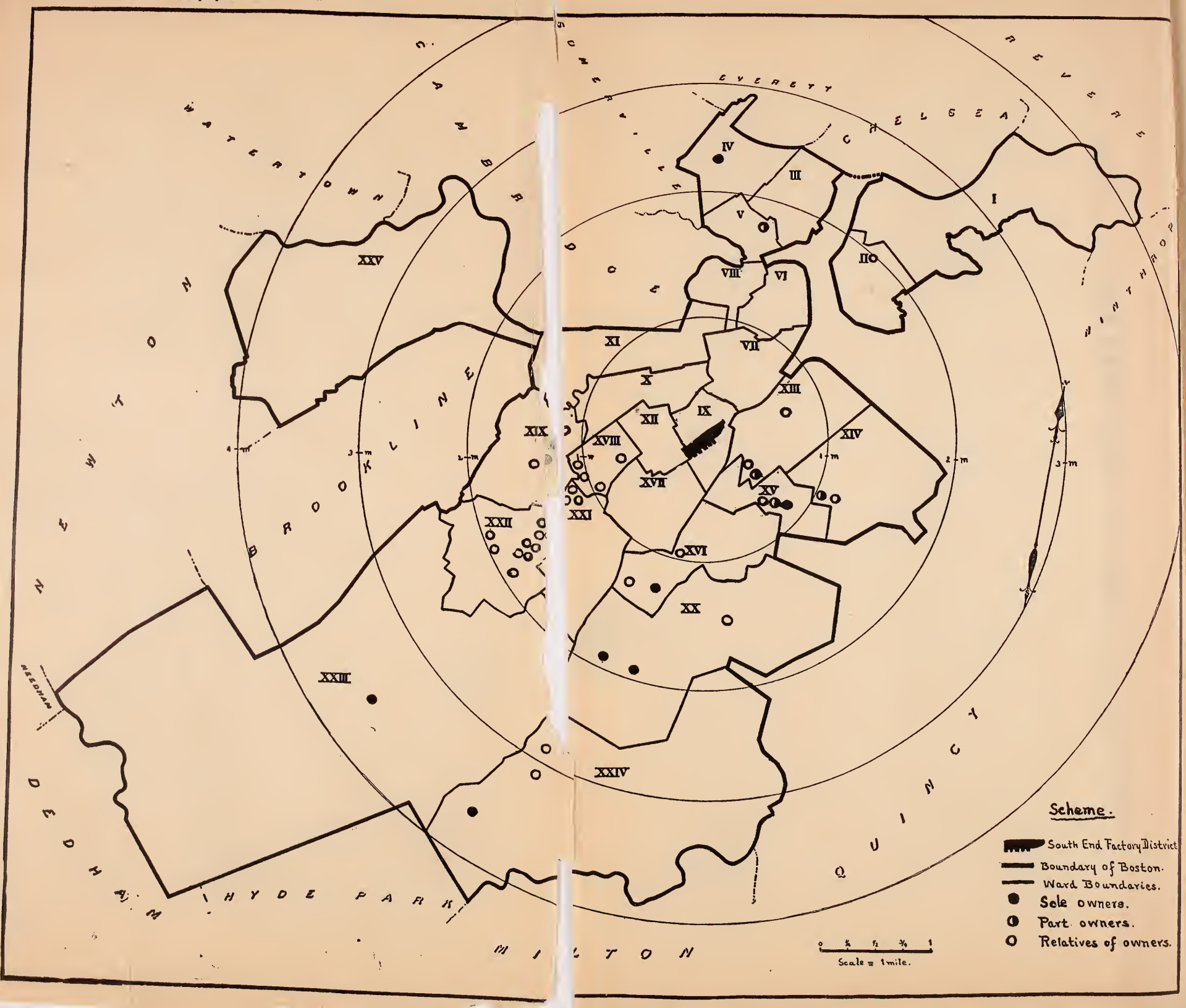
| | Class A. | | | | Class B. | | | |
|---|---|---|---|---|---|---|---|---|
| | No. | | Per Cent. | | No. | | Per Cent. | |
| Within 1 mile | 70 | 169 | 41.4 | 100.0 | 227 | 342 | 66.4 | 100.0 |
| Over 1 " | 99 | | 58.6 | | 115 | | 33.6 | |
| " 2 miles | 26 | | 15.4 | | 35 | | 10.3 | |
| " 3 " | 10 | | 5.9 | | 10 | | 2.9 | |
| " 4 " | 0 | | | | 3 | | | |
| " 5 " | 0 | | | | 1 | | | |

From this table we see that of Class A, 41.4 per cent. live within one mile from their work, while of Class B. 66.4 per cent. live within one mile, showing that the more central the home the less apt is it to be a permanent one. When we consider the circle of two miles in radius we find that of Class A there are 56.8 per cent., while of Class B there are 76.6 per cent., showing that, even considering this wide area, distinctly urban residence means for this grade of wage earners considerable change of residence.

BY THE SOUTH END FACTORY OPERATIVES.

# PLATE III.—LOCATION OF HOMES OWNED BY THE SOUTH END FACTORY OPERATIVES.

To be considered as superposed on PLATE I.



C. OWNERSHIP OF HOMES BY THE FACTORY OPERATIVES (PLATE III.).

As a basis for this study the most representative of the wage lists obtained from the South End factories have been taken and a slip made out for each operative, the total number of slips being 511. The desired information was arranged on the slips in such a way as to facilitate the sorting of them for various purposes illustrated later. A sample slip containing in full the information sought for each person appears below: —

VI. 24—9

J._____ P. R_____,

No. ____ _____Street.

1901, 1900 _____ pianos 37

m. a. _____ o

(RESERVED FOR OTHER INFORMATION)

Sole owner

R. E. = $2,600, 6,300 sq. ft., $600, $2,000. 9½c.

This slip would then read — J—— P. R——, a piano maker, aged 37, living at No. — —— St., Boston, Ward 24, Precinct 9, works in the South End Factory VI. (a piano factory, the name of which may not be given), and that there are no other male adults living in his house, also that he owns this house and land, valued as follows: — Total valuation, $2,600; square feet of land, 6,300; value of land, $600; value of building, $2,000; value of land per foot, 9½ cents.

The information on each of these slips was obtained from the assessors' books and from the lists of assessed polls for the years 1901 and 1900, and may be considered fairly accurate.

From these data, carefully obtained for 511 representative operatives in the South End factories, Tables 7 — 15 have been compiled. These are commented upon in order. The general results are given in the following table: —

## TABLE 7.

| | | No. |
|---|---|---|
| A. | Number *found* at addresses given in assessed polls list of May 1901: | |
| I. | Living in house with no other male adults — | |
| | (*a*) Owning the real estate occupied . . | 8 |
| | (*b*) Not owning the real estate occupied . | 14 |
| II. | Living in house with other male adults — | |
| | (*a*) Of same surname . . . . . | 14 |
| | (*b*) Of same and other surnames . . . | 88 |
| | (*c*) Of different surnames . . . . . | 45 |
| | Total (A) — all males . . . . | 169 |
| B. | Number *not found* at addresses given in assessed polls, lists of May, 1901: | |
| I. | Surname found but not given name — Males, 44; females, 22 . . . . . | 66 |
| II. | Neither given or surname found — Males, 157; females, 53 . . . . . | 210 |
| III. | Streets not found — Males, 11; females, 1 . . | 12 |
| IV. | Street found but not number—Males, 45; females, 9 | 54 |
| | Total (B) . . . . . | 342 |
| | " (A) . . . . . | 169 |
| | Total List . . . . . | 511 |

It should be noted that out of the total of 511, only 169 (Class A), or 33 per cent., are found on the list of assessed polls. Since our list contains some names of females and male minors, we could not expect to find their names there. To the total found it would therefore be safe to add at least the number of those at whose addresses were found adult males of the same surname, or the sixty-six of Class B, Group I., for it may be assumed that the males (mostly minors) and the females who resided with other members

of the family have probably not changed their addresses during the year to any considerable extent. This gives, then, a total of 235, or 46 per cent., who may be considered permanent residents for the entire year; while 276, or 54 per cent., have changed their residence during the year, May, 1900 — May, 1901. In general, then, the list shows that the wage earners of this class — the South End factory operatives — preserve little permanency of residence, at least half of them having changed their addresses within one year. There are but few cases found where a resident has vacated a house owned by himself.

A. Comparing location of residence of owners of real estate which they occupy with those who are merely renters, we derive the following table: —

TABLE 8.

| | |
|---|---|
| Total (Class A) considered . . . . | 169 |
| Total Owners . . . . . | 45 |
| Total Renters . . . . . | 124 |

| | Owners | | Renters | |
|---|---|---|---|---|
| | No. | Per Cent. | No. | Per Cent. |
| Within 1 mile . . . | 10 | 22.2 | 60 | 48.5 |
| Over 1 " . . . | 35 | 77.8 | 64 | 51.6 |
| Within 2 miles . . . | 40 | 88.8 | 103 | 83.1 |
| Over 2 " . . . | 5 | 11.1 | 21 | 16.9 |
| " 3 " . . . | 2 | 4.4 | 8 | 6.5 |

Here we see that of those who own their residences only 22.2 per cent. live within one mile of the factory district; of those who rent 48.4 per cent. are within one mile; while 88.8 per cent. of the owners live within two miles and only 83.1 of renters live within two miles. In the larger area of two miles radius the rule seems not to be followed, and this is due to the more than proportionally large number of houses owned by the occupiers on that belt between one and two miles distant from the factory districts, particularly Wards 19, 21, and 22, the in-town portion of West Roxbury, which district seems to be a favorite one for ownership of real estate by these residents. No doubt this apparent contradiction of the rule — well illustrated by the circle of one mile radius — is due to the fact that when transportation facilities were less

developed this was the outermost margin of possible residence for these employees, and at that time that land was less valuable than at present and could be purchased by them. In a few years, no doubt, the ownership of real estate will be more marked in the outer circles beyond two miles radius; already there is a movement in that direction, as several cases in Ward 24 well illustrate. The time is rapidly coming when it will be no longer profitable for one whose income does not exceed $20 per week to own property for residence purposes within the circle whose radius is two miles from the central district here considered.

Of the total list of 511 operatives here considered, only sixty-eight, or 13.3 per cent., have interests in the homes in which they live. The assessed valuation of all the property occupied by each of the 511 operatives was obtained from the books of the assessors of real estate for Boston for the year 1900. The assessed values of only the sixty-eight, however, are considered here. It is convenient to group the sixty-eight operatives who were found to have interests in the property which they occupied thus: —

TABLE 9 (*a*).

(1) 21 or 30% were *sole owners* of the property occupied by them.
(2) 11 or 16.1% were *part* " " " " "
(3) 36 or 53.9% were *occupiers merely* of property owned by relatives.

68 hold interests in the property occupied.

The valuation of the property occupied by each group may be summarized as follows: —

TABLE 9 (*b*).

| | | Total Valuation Real Estate. | No. of Persons. | Average Valuation Real Estate. |
|---|---|---|---|---|
| (1) | Sole owners . . . | $84,600 | 21 | $4,028.59 |
| (2) | Part owners . . . | 33,400 | 11 | 3,036.37 |
| (3) | Occupiers (merely) | 110,400 | 36 | 3,067.23 |
| | | $228,400 | 68 | $3,358.83 |
| | Average for 68 cases . . . . . | | | $3,358.83 |

It thus appears that the average valuation for the cases of each group is nearly the same, showing that whatever the form of the interest in the property, that fact has little influence upon the choice of the house occupied.

The range of valuation of each group does not differ so greatly as might be expected. For the three classes it is:

TABLE 9 (*c*).

| | | Highest. | Lowest. |
|---|---|---|---|
| (1) | Sole owners . . . | $10,200 | $1,200 |
| (2) | Part owners . . . | 7,200 | 1,700 |
| (3) | Occupiers (merely) . | 6,500 | 1,000 |

It is interesting to note here that there were found two operatives on our lists not included in any of the three groups above, who owned property other than that which they occupied, valued in the one case at $5,900 and in the other case at $5,800.

Of all the blocks of real estate owned by factory operatives there are but three of which the assessed valuation exceeds $6,000. And excepting the two cases mentioned, no one was found to own real estate other than that which he or she occupied.

The operatives who own real estate which they occupy have already been considered together with regard to radial distances of their homes from the factories, as compared with the radial distances for renters. Here the three classes of owners are compared in this respect. The facts may be summarized thus: —

TABLE 10.

| Class | No. | Number and per cent. living within — 1 mile belt. | 2 mile belt. | 3 mile belt. | 4 mile belt. |
|---|---|---|---|---|---|
| (1) | 21 | 3 or 14.3% | 13 or 61.9% | 2 or 9.5% | 3 or 14.3% |
| (2) | 11 | 3 or 27.3 | 8 or 72.7 | | |
| (3) | 36 | 11 or 30.6 | 19 or 52.8 | 6 or 16.6 | |

In a graphic way this distribution is clearly brought out on Plate III. Of each class considerably more than one-half are found to live within the two-mile belt, and the most of these are located in the southern portion of that belt. This concentration is shown more clearly in the table of valuation by wards following:

TABLE 11.

| Ward. | No. of Owners. | Total Valuation. | Valuation. Class (1). | Valuation. Class (2). | Valuation Class (3) |
|---|---|---|---|---|---|
| 22 | 14 | $53,600 | $22,800 | $7,300 | $23,500 |
| 24 | 8 | 20,400 | 8,500 | ..... | 11,900 |
| 18 | 7 | 23,000 | 7,300 | ..... | 15,700 |
| 21 | 6 | 24,700 | 12,900 | 5,800 | 6,000 |
| 19 | 6 | 22,300 | 5,100 | 3,000 | 14,200 |
| 17 | 5 | 9,400 | 1,200 | 3,200 | 5,000 |
| 16 | 5 | 21,100 | 12,500 | 7,200 | 1,400 |
| 13 | 4 | 5,800 | ..... | ..... | 5,800 |
| 20 | 3 | 13,100 | 4,600 | 2,900 | 5,600 |
| 15 | 3 | 9,300 | 4,000 | 4,000 | 1,300 |
| 14 | 2 | 8,600 | ..... | ..... | 8,600 |
| 5 others 1 each | 5 | 17,100 | 5,700 | ..... | 11,400 |
| 16 Wards | 68 | $228,400 | $84,600 | $33,400 | $110,400 |

From this table it will be seen that Ward 22 ranks far ahead for Classes 1 and 2, and is surpassed by only one other ward, Ward 20, for Class 2. For total valuation Ward 22 furnishes $53,600, or over twice that of the next highest, Ward 21, with $24,700. Then follow in close succession Wards 18, 19, 16, and 24, each with a total of over $20,000. It thus appears that for the factory operatives who are able to buy the houses in which they live Ward 22 is by far considered the best for that purpose, and then in point of desirability follow Wards 21, 18, 19, 16, and 24, which wards, with the exception of the last named, lie within the southwest quadrant of the circular area whose radius is two miles, the center being the center of the factory district. The data are hardly sufficient to give any very definite results as to the relative advantage of each ward for Classes 1, 2, and 3.

Two precincts of Ward 22 and one of Ward 21 deserve special notice, inasmuch as they contain considerable part of the property thus owned.

TABLE 12.

| Ward. | Precinct. | | Total Value. |
|---|---|---|---|
| 22 | 3 | 4 homes | $20,100 |
| 21 | 2 | 4 " | 18,900 |
| 22 | 5 | 5 " | 16,400 |

In these three precincts the thirteen owners are nearly all Germans, as such names as Gramer, Kraft, and Vogel would lead one to suppose. Wards 21 and 22 in West Roxbury are quite generally settled by Germans, and these residents are considered very enterprising and industrious people. It is not surprising to find that the precincts containing the greatest amount of property owned by South End factory operatives lie just in this German settlement, especially when we know that the most skilled workmen in the South End piano factories are Germans and Swedes from West Roxbury. These home-loving workingmen who live at a considerable distance from the factory district in which they work, do so in order to avoid the congestion of the more central districts. They may well be held up as models of thrift and sound common sense, and they form a delightful contrast to that less skilled, shifting, housed-but-homeless class of workmen too commonly found in such manufacturing centers as the South End. The showing made by these thirteen Germans is valuable evidence of the larger possibilities of home life open to the wage-earner of steady industry and foresight.

While we are considering this subject of ownership of property it would be fruitful to consider (with regard to the unity of the family) the 169 who have not changed their addresses. To this end the following table has been prepared: —

TABLE 13.

| Houses | No. of Houses considered. | Number of other Adult Males in Houses Specified — No other. | One other. | Two others. | Three others. | Total. | Average No. per House. |
|---|---|---|---|---|---|---|---|
| Occupied by the owners, | 68 | 16 | 39 | 77 | 47 | 179 | 2.6 |
| Not occupied by the owners, | 101 | 6 | 6 | 215 | 192 | 419 | 4.0 |
| Totals . . . | 169 | 22 | 45 | 292 | 239 | 598 | 3.5 |

From this table it is seen that of those who own the property which they occupy only 30.9 per cent. have no other male adults than members of the family living with them in the house, while in the case of those not owning the property this may be said of only

2.8 per cent. The sixty-eight houses of the owners are occupied by a total of 179 male adults, or an average of 2.6 persons per house, while the 101 houses occupied by non-owners are occupied by 419 male adults, or an average of 4.0 male adults per house, from which it may be concluded that those who own their homes are less inclined to share them with other male adults than are those who rent.

The following table considers the owners in three classes: —

TABLE 14.

| | | No. of homes | No. of other adult males in house | Persons of same surname | Persons of same and other surnames | Persons of other surnames | Total | Average No. per house |
|---|---|---|---|---|---|---|---|---|
| (1) | Homes of sole owners | 21 | 7 | 3 | 3 | 25 | 38 | 1.18 |
| (2) | Homes of part owners | 11 | 2 | 6 | 2 | 16 | 26 | 2.46 |
| (3) | Homes owned by relatives | 36 | 7 | 30 | 72 | 6 | 115 | 3.36 |
| | | 68 | 16 | 39 | 77 | 47 | 179 | 2.63 |

The sixty-eight owners considered above include thirty-six persons who live in property owned by relatives. When these are excluded from the sixty-eight whom we called owners, we find that the remaining thirty-two live in houses the total male population of which is but sixty-four, or an average of two male adults per house. Carrying the process of elimination still further, we find that in the houses of the twenty-one who are sole owners of the house occupied, the total population is but thirty-eight, or 1.81 persons per house. Were there a larger number of such cases as evidence, we would conclude that ownership and family privacy (fairly represented by male adult population per house) are very closely related, and that the more complete the ownership of the house the less it is probable that other persons than immediate members of the family of the owner will also reside with him.

A comparison of ages of the owners of homes and of renters may be made with profit.

TABLE 15.

| | | | | |
|---|---|---|---|---|
| Average age of | 48 | owners was | 42.4 | years. |
| " " " | 126 | " " | 38.4 | " |
| Diff. between average age of owners and of renters, | | | 4.0 | " |

This difference of four years between the average ages of the owners and the renters is to be expected, since workingmen could hardly be expected to own their homes until after several years of saving.

When we compare the average of owners and part owners with that of occupiers of houses owned by some member of the family we find that the average age of the former was forty-two years, while the average age of the latter was thirty-seven years. This result is conceivable, since younger men have less hesitation in occupying the property of their relatives, while older men may be expected to own their own homes to a large extent.

Considering the forty-eight owners or part owners whose ages are given, we find that according to age groups they are distributed as follows:

TABLE 16.

| Age Group | No. | Per cent | | |
|---|---|---|---|---|
| 20-30 years | 12 | 25.0 | | |
| 30-40 " | 12 | 25.0 | | |
| 40-50 " | 14 | 29.1 | 75.0% | |
| 50-60 " | 9 | 18.8 | | 50.0% |
| 73 " | 1 | 2.1 | | |
| | 48. | 100.0% | | |

We find that one-half of those who own their homes are over forty, and that 75 per cent. are over thirty years of age, showing that most of the property is acquired after the workingman has passed his thirtieth year.

It would be interesting to determine the relation of age to distance from the factory district, but the data at hand would hardly justify any conclusions on this point, inasmuch as there are few operatives in the South End factories over fifty years of age, and a rather small number under thirty. A comparison also of the ages in different employments would hardly be profitable in this case on account of the paucity of data.

## SECTION V. DETERMINING FACTORS IN THE CHOICE OF HOMES BY FACTORY OPERATIVES.

A. The great prevalence of the renting of homes, even by those whose incomes would admit of the purchase of them, and aided as they might be by the many agencies which make home-buying a very simple and safe investment, would seem very surprising. Inquiry of those whose homes both in the city and suburbs have been visited, brings out the fact that the uncertainty of continuous employment in any one locality renders it inadvisable for those without independent means to hold real estate, when a change of employment to another locality might force them to dispose of it at a probable loss. It would appear that, in many occupations, householding by workingmen would be decidedly unwise. This is true in most occupations such as those in the South End factories which we have been considering. Realizing this, but few of the workmen have invested in homes, as we have seen. Most of those who have so invested were found to be piano factory operatives beyond middle age, well established in business and receiving wages, principally for piece work, ranging from $20 to $30 per week, and their employment can be considered fairly constant. In general we may say that home-buying for the ordinary workingman is inadvisable, for usually he will be unable to buy the home outright, and a workingman who has a mortgage on his home generally has his body and soul mortgaged with it. In addition to his being bound to one locality when his employment may have been changed to another, he must endure a vast amount of worry incident to the payment, periodically, of interest on the mortgage, and usually after buying a house under instalment conditions he finds that he has paid too much for it. In general it would be better for him to keep his savings in cash at a savings-bank and buy the home when he is able to pay for it *in toto*. For the workingman, cash is the best form in which to keep his savings, for cash is easily mobile and does not depreciate. Savings-banks furnish the best means of investment for the workingman, for funds invested there may serve as an out-of-work insurance, being worth far more in times of panic than in prosperous times, while real estate during commercial crises often suffers an enormous depreciation. Furthermore, the ordinary workman cannot be expected to have a wide knowledge of real estate

values nor the time for any considerable study of such matters. Usually, also, there are very few chances for very profitable small investments. Thus the savings-bank becomes practically the only means for investment of small savings, and it is generally the safest. The many building agencies which seek to encourage the purchase of homes by workingmen can seldom offer any inducements to the lower grade of investors; they cater more largely to the middle class, especially to those whose incomes are moderately large and certain. The smaller investor must, therefore, assume his own risks in selecting and purchasing his home, and too often he suffers at the hands of a speculator.

Unfortunately, however, savings for any purpose play but a small part in the standard of living of the lower grades of labor; especially is this true of those grades of which the members have an income of less than $20 per week. Workingmen of this grade are excessively blessed with an abundance of children, and, in consequence, their incomes are distributed among so many that they go to purchase bare living necessities. In such cases savings can furnish no item in the standard of living and no surplus whatever can accumulate from such incomes. But when we consider the better paid workmen, such as those working in the piano factories at the South End, whose income is seldom under $20 per week and often as high as $30, we may expect to find a surplus over necessary expenditures. It would seem that here at least savings should furnish an appreciable item in the wage budget, else the standard of living will include comparative luxuries, and thus make possible a reduction of the standard wage. Savings, on the contrary, furnish a legitimate item in the standard of living, and serve, not to reduce the wage standard, but rather to lift the workingman himself to a higher position in the economic market.

No doubt one reason why we do not find more operatives of this class owning their own houses is due to the fact that a man who has the ability to save $3,000 with which to purchase a house from an income of $20 to $30 per week is one who would soon gain the ability to obtain a better position than that of a factory operative. Such employees grow into larger positions as they gain greater economic freedom and independence. One with the ability to make a permanent and profitable investment in a home would undoubtedly succeed better as a director of others than as a mere workman. This

same larger ability demanded of one who shall succeed in purchasing a home may also account for the smaller number of male adults, other than members of the family, who live in the homes of the owners. One who has the ability to purchase a house rises above the necessity of securing aid in the payment of rent; the same motive which impels him to buy the home leads him to exclude from it all discordant or extraneous elements and to preserve it in its most homelike aspects — those of privacy and of natural unity.

It has been observed that the average age of owners of their homes is greater than the average age of the renters. Young men, especially those under thirty years of age, are usually so unsettled in occupation or circumstances that it is unwise for them to invest in permanent homes. Since location and character of the home is considered the first index of social position (especially among newly married people), young married men are unwilling to take homes which are within their incomes. It would manifestly be impossible for them to purchase such homes outright, and hence the young man rents property and pays a rental which for the time is not properly proportioned to his income, but to which at length his income rises as his industrial efficiency increases. For a number of years, therefore, there is no attempt on his part to own his home, because his energies are taxed to the utmost in order that he may preserve the abnormal standard of living which his social aspirations led him to assume at the start. After a period more or less prolonged, depending upon the individual's increased skill and the opportunities for advancement in his chosen occupation, there comes a time when his income is normally adjusted to his standard of living. Then the young man must decide whether or not he shall include the item of savings as an item in that standard for the period during which his income and efficiency are at the highest point. During this period of his life between the ages of thirty and fifty years, when his social ambitions are less operative, and his industrial connections are more permanent, the family man finds a surplus over necessary or desirable expenditure which he can begin to set aside towards the purchase of a permanent home. The process of purchase once begun results in greater and greater enthusiasm as the goal is approached, and at length, if his energies have been well directed, the workingman finds himself the possessor of a comfortable home. It is not the attempt to purchase, but the method of

purchase which so often results in discouraging failure. From the observation of a number of cases the writer believes that, as a rule, investment in real estate by the workingman is hardly wise except where he can act through some agency which shall afford him adequate information as to desirable property and, above all, insure him that protection from speculators at whose hands small investors of all classes suffer so much without possibility of redress. In general, also, the workingman should invest his earnings in savings-banks until he shall be able to purchase his home outright, if he purchases it at all; for during the process of a long purchase, circumstances may have changed so as to have rendered the purchase altogether undesirable.

With regard to the renting of homes, it is undoubtedly true that the rents paid by the workingmen in Boston are higher than those paid in any other large city of the United States. This is in part due to their living in an urban area where the value of land enters more largely into the rental of the house. In the Tenement House Census made in 1891-1892 by the Massachusetts State Bureau of Statistics of Labor, it was shown that the rents paid in this immediate factory district of the South End were: —

| | |
|---|---|
| For 3 rooms, per week . . . . | $2.00—$3.00 |
| For 4 rooms, per week . . . . | $2.75—$4.00 |

Since 1890 the valuation of real estate (in this district) has decreased slightly, and the district is becoming more undesirable as a residence district, — shown by an increased number of room vacancies, — so that, on the whole, house rents have decreased since that time. But so undesirable is the district as a residential quarter, and so much cheaper are the rents in the suburban districts, now so easily accessible by electric street-cars, that there seems to be no apparent reason why this district should not be rapidly depopulated of the better grade of the factory operatives. General information on this point, which it is impossible to arrange in any definite statistical form, information, however, which was obtained by personal visits to the homes of workingmen both in the central and the suburban districts, confirms the view that rents are enough cheaper in the outer districts to furnish a transportation fund sufficient for the regular use of the income producing members of the family in getting to and from their work in the central district. Where

a workingman whose income is from $20 to $30 a week pays $4 to $5 a week for his living quarters in the immediate factory district he can secure the same accommodations in a healthier suburban environment for at least $1 a week less. This difference will more than cover the weekly car fare, at five cents a trip, which must be expended by the chief income producer of the family.

B. The work of encouraging suburban residence on the part of workingmen is one of the most worthy efforts than can be made toward solving city problems. Almost every large city has housing associations having this object in view, but the supply of houses which they have been able to furnish is far below the demand, and many of those that have been built are located in the crowded districts of the city, thus adding to the congestion which they should relieve. Doctor Gould in his report on the housing of the working people[1] says: "There can be no question as to the remunerative character of building enterprises conducted in the interests of the artisan and other well-paid laborers. Money invested for this purpose brings a safe and stable return. There is, therefore, absolutely no reason why every workingman in receipt of a fair wage should not be able to command a favorable living environment." And further he says that "If the Boston Co-operative Building Company can afford to provide sanitary and convenient accommodations at a figure considerably smaller than is often charged for houses which are so bad that they have to be closed by public authority, and yet earn 6 per cent.[2] besides providing for a substantial depreciation fund, there would seem to be absolutely no reason why private capital should not house the working population of Boston on a satisfactory commercial basis." Housing associations have as yet failed to combine into a vital working principle the two necessary lines of action — restriction of congestion with an encouragement of decentralization. They have given their attention to the one or the other with usually a fair degree of success. In the one case they have replaced unsanitary, densely populated tenements with more healthful, less crowded dwellings in the congested districts. In the other they have erected suburban modern dwellings which serve their purpose fairly well, but which usually are rented by a better class of occupants than those for which they are intended. But in all their

(1) Eighth Special Report of the Commissioner of Labor, Washington, 1895, p. 419.
(2) Now 5%.

efforts, there seems to have been no idea of making the one enterprise serve as a feeder to the other through an attempt to adapt the link of transportation to their purposes. The first method which strengthens the force of centralization is in direct opposition to the second which adds to the force of decentralization. In their urban houses they should encourage the residence of those who *must* remain near the central districts; to their suburban houses they should seek to draw off that portion from the urban houses which *can* conveniently live at a distance from the urban districts. To this end, transportation between the two districts should be so adapted that the transfer might be readily made. A careful oversight of this correlating factor might result in the increased value of the suburban houses which should more than offset a possible decrease in the profits of the urban houses, resulting from an outflow from them to the outer district. By bringing the two operations together through the medium of increased facilities of transportation, the actual service of housing associations might be greatly increased. In all work of this kind, however, philanthropy must not play too large a part, else it will perpetuate the evils which it seeks to avoid. The working principle of "philanthropy and five per cent." involves no contradiction. The housing of several hundred working girls in a large building in the South End at rates which are to be below the normal, the venture being subsidized by large gifts for the purchase of the building, is not altogether to be looked upon with approval, since such subsidization will result in reducing the standard wages of the girls who are to be thus housed. The main objection, however, is that this venture will serve to concentrate in one district a large number of working girls under conditions which will counteract the decentralizing forces tending to encourage residence in the less thickly populated and less demoralizing sections of the city.

(*a*) The centralizing forces which have caused the wonderful growth of large cities during the past century or more should find decentralizing forces to counteract them. The attractions encouraging urban residence have become so diverse and powerful that there is no need of philanthropic effort in the direction of furnishing more attractive houses within the city. The effort expended should be such as shall encourage suburban residence by lessening the expenditure of time, money, and energy required in

getting from those homes to the industrial center and to the scenes where may be enjoyed the pleasures and privileges of urban life. Transportation is that great economic factor which after centuries of slow development has suddenly become a force of such magnitude that it is able for one-half of the day to depopulate large central districts which during business hours furnish hardly standing-room for the multitudes gathered there. A power, which succeeds in moving to and from the center of the great city of New York more people in the course of a year than are moved on all the steam railways of United States taken together during the same length of time,[1] should be given its due prominence as a means of relieving the extreme concentration observed in certain sections of Boston. The direction of such a force should not be left entirely in the hands of a single corporation, but should have the most careful attention of those interested in the life of the industrial population of our cities. The lives of thousands of workingmen depend upon the growth of this great factor in modern civilization. It is easier to prevent the abnormal growth of great crowded areas than to get rid of great tenement slums. If the industrial population is enabled to get conveniently and quickly to the more habitable districts, where better houses can be secured for less money, the centralizing tendency will be in large measure offset and we shall have urban districts of a more homogeneous character, while the cry of "no room to live" will be unheard and forgotten.

(*b*) The influence of the value of the land on the location and rent of dwellings may be briefly considered in this connection. It has been shown that only two of the South End factory operatives have purchased, for residence purposes, land of which the assessed valuation is more than 60 cents per foot. Although the valuation of land occupied by renters is in many instances higher than that rate, it was seen, however, that those districts which show a very high valuation of land are avoided even by the renters. The explanation of this is that where land is expensive the rent of the land enters largely into that of the dwelling erected upon it. The standard of living of the better paid artisans, such as we have been considering, demands better housing accommodations than can be found by him in the more crowded districts. He therefore

(1) 530 million people were moved by the steam railroads of the United States in 1900.
800 million people were moved by the Elevated and surface cars in N. Y. City during the same year.

gives that district over to the poorer residents, who, content with narrower, less commodious, and less sanitary quarters, make up the high rental of each house by sharing it with a large number of occupants. The value of the building may be greatly mispro-portioned to that of the land (in many instances the value of the building is less than one-tenth that of the land), but it has crowded into it a teeming population who are paying together a total rental for the building which is several times that which might be paid for much finer quarters in a pleasanter, more healthful, and less crowded neighborhood. The payment of these abnormal rents for residence quarters in crowded districts is the result of the abnormal use of the land, the value of which is determined by its location for other business purposes. The forces which cause the increase of population may be of an industrial or mercantile nature, and are cumulative, growing with the increase of population and in turn being influenced by that growth. After a time the value of the land for business purposes rises so high that the land occupied even by the densest population no longer furnishes a margin of profit for residential purposes, so that we find an inner circle of very small area given over wholly to commercial enterprises.

The value of land for residential purposes tends to vary directly with its population per unit area, but the value of land which has been given over to business purposes varies directly with the day population but in a rapidly increasing ratio, while it *seems* to vary indirectly with the night or resident population because the night population occupies space required for more profitable day uses. Land of which the valuation is extremely high will show absolutely no resident population. Thus we find in Ward 7, Precinct 1, of Boston, land valued at over $180 per foot,[1] while the average assessed valuation of occupied land (in 1900) for Ward 7 as a whole is $16.70 per foot. This is the highest valuation for any ward in the city. The average assessed valuation of occupied land for the city as a whole was $1.49. The plot of land assessed at $180 per foot is in the very heart of the mercantile section of the city. Surrounding it for a limited space there is a mercantile section which is utterly devoid of resident population, while a larger area with this section as a center shows a decrease of population per

(1) Taken from the books of the Assessors of the City of Boston.—Property at the corner of Winter and Washington Streets, assessed May 1, 1901.

unit area. However, in Ward 6, Precinct 6, only one-eighth of a mile distant, there is the densest population found in any precinct in the city. Furthermore, in the period 1895-1900 this precinct showed a greater increase in population per unit area than any other in the city. Other precincts on the edge of the mercantile section also show a very dense population, and most of them a large increase of population in recent years. This district on the very edge of the mercantile area furnishes living quarters for the very poorest class of people living in Boston. The rents are here so high that, paradoxical as it may seem, the better paid artisan moves away to make room for those poorer than himself. Only through the extreme crowding of occupants can this district be made to pay fair profits when used for residence purposes. So long as land furnishes a margin of utility for housing purposes it is used in that way in spite of the greater pressure of the commercial interests upon it. At length the margin fails to be realized, then the houses are abandoned and a new area is taken into that of the commercial center. The former residential population crowds into the new marginal territory and shares there the increased rents of the houses now on the borders of the enlarged mercantile section. This process is well illustrated by the growth of the central districts of Boston and indeed of all other large cities.

The development of factory districts is, however, different in some respects from that of the commercial center. Its first stages of development are very similar; the concentration of the factories results in, and is a result of, the growing population. But the rent of the land occupied enters so largely into the operating expenses of the factory that, where the land occupied has a value of more than $2 per foot, it becomes unprofitable for the factory to remain there. Already in the South End we have found one factory moving to a cheaper location and another continuing at its location only through renting the ground floor for mercantile purposes, and finally moving out of the district. So we find that the South End is losing its character as a factory district and that it is being given over to residential and mercantile purposes. As yet its resident population is not very great. During the period 1895-1900 the increase of its population was only about 6 per cent. In fact a careful census of the room vacancies along and near Washington Street — the main thoroughfare of the district, on which the new

elevated railroad has been built — showed that there were more vacancies in October, 1901, than there were six months before, when the road was not in operation. This decrease of population dur- the year 1901-1902 is in part due to the undesirable features of the road. There has been little building of dwelling-houses in this district for several years, and people of a lower grade, constituting partly an overflow from the more crowded immigrant sections of the city, are beginning to take up quarters in this district. Unless some counteracting force appears to prevent this inflow, the South End will undoubtedly take on more the characteristics of that crowded section immediately surrounding the central mercantile district. There can be but one remedy for such a condition of overcrowding and that is in a transfer of a portion of the population to more suitable districts.

C. For those who remain within congested city districts the chief methods that may be used in relieving their condition are (1) by demolishing unsanitary buildings, (2) by regulating the construction of new buildings, and (3) by the construction of model dwellings. Boston is already beginning to apply these remedies to the conditions in the crowded districts, and with very marked success. As a result of the tenement-house investigation made in 1892 by the Massachusetts Labor Bureau, followed by the admirable work of the Twentieth Century Club and by certain other public-spirited persons, a large number of insanitary buildings in various portions of the city were demolished by civil authority, and each year since a large number has been destroyed or condemned. The laws regulating the construction of new dwellings are so severe and so well enforced that it is now impossible in certain parts of the city to build dwelling-houses that will pay a fair rent. On account of these rather strict building laws the erection of better dwellings in the crowded districts (where land is very valuable) is not only unprofitable as a philanthropic but as a private business enterprise as well. The new buildings are therefore put up on the outskirts of the crowded districts, and those in the crowded areas remain in that condition which is just beyond the margin of the law. We have seen that those whose wages are low are of necessity compelled to live near their work. For such, protection by arbitrary means is necessary. But for those who are not on the very verge of economic distress there is a way of escape which until recent years has not been

largely open to all. Time-distance, rather than distance in space, is the obstacle which prevents the workingman from seeking better housing conditions at a distance from his work. The effect of rapid transit is to enlarge the area in which the better grade of workingmen can conveniently have their homes. The transportation facilities of Boston are hardly excelled by those of any other city in the world; there is then small excuse for any considerable crowding in any portion of the city limits, and actually, as we have observed, the people are beginning to realize the opportunities that are being presented and are acting accordingly. As an outcome of economic events "a decent home environment for the urban population" is being created through the limitation of space by means of rapid transit. This powerful economic agency is the greatest reformer of city crowding that has ever appeared. Through intelligent use of this agency, the deplorable tendency of mankind to crowd together may be successfully opposed in our own city.

## CONCLUSION.

From what has been said, we see why so much attention has been given in this study to the question of transportation as it affects the housing conditions of the South End factory operatives. In fact this has been the thread which has connected the various phases of the subject examined. Transportation entered the problem in the first stages of this investigation, and has become of greater importance as we advanced until other explanations of the locations of the homes of the employees have seemed but of small importance.

As we have proceeded we have found that more than half of the operatives in the factories live beyond walking distance from their work, and that these were the better paid and more enterprising workmen. Following them to their homes, we have been surprised to find how much more desirable accommodations have been secured by them for the same money than they could have secured in the immediate factory neighborhood.

Looking into the homes of those who reside near their work, we find the housing conditions much less desirable, and that generally the occupants are the poorer paid of the operatives. There are three main causes for their remaining where they are: (1) low wages (but below $10 a week this is hardly a sufficient reason),

(2) ignorance of the better homes obtainable elsewhere for less money, and (3) a sort of "residential inertia" which is due to formation of local ties, to their becoming accustomed to crowded and sordid conditions, and to a sort of hopelessness which the peculiar atmosphere and environment may induce in any one who does not at times experience the delightful freedom from oppressive crowding. The salvation of such poor rests upon an enlargement of their physical environment. This, rapid transit is accomplishing. While attending to the needs of our "city dwellers," we should not forget those who would rather be "suburbanites" if they could. The establishment of better dwellings in crowded districts is a grand work if it does not increase or prolong such crowding. But such work becomes worse than fruitless if it prevents the establishment of homes in less congested and more habitable districts.

Along with our Better Dwelling Societies we should have a society for the encouragement of suburban residence for the poor — such a society having a central bureau where information may be obtained as to good and convenient localities for the homes of workingmen outside of the crowded city limits. Philanthropic persons might devote themselves to the worthy task of offering valuable information to those workingmen who are ignorant of better possibilities for home life in a healthier and more ennobling environment; thus liberating those whose "residential inertia" holds them imprisoned in habitations, which would be unendurable did the victims of such congested conditions but realize what they suffer.